

CLAIMS

1. A radio information communicating system, as a system
in which an access relaying apparatus and one or more radio
5 communication terminals constitute a local network to mutually
perform radio data communication,

wherein the radio communication terminal comprises:

information embedding means for, when successively
transmitting a plurality of packets to another radio communication
10 terminal in the local network or to the access relaying apparatus,
embedding abandonment time information in a packet to be
transmitted, the abandonment time information being information
of a time until a packet to be transmitted next to the packet,
when left unsent, is abandoned through time-out control;

15 carrier sense means for determining whether a radio
transmission line between the other radio communication terminal
or the access relaying apparatus and the radio communication
terminal is available or not; and

transmission means for transmitting the packet having
20 the abandonment time information embedded by the information
embedding means into the local network in the form of radio waves
when the carrier sense means determines that the radio transmission
line is available, and

wherein the access relaying apparatus comprises:

25 reception means for receiving all packets of data

transmitted by the transmission means;

reading out means for reading out abandonment time information contained in the packet received by the reception means;

5 determination means for determining whether or not the reception means has received a packet next to the packet received by the reception means before a time contained in the abandonment time information read out by the reading out means elapses; and

10 transmission right granting means for, if the determination means determines that the reception means has not received the next packet before the time contained in the abandonment time information elapses, compulsorily granting to a radio communication terminal trying to transmit the next packet
15 a transmission right to transmit the next packet.

2. The radio information communicating system according to claim 1, wherein the information embedding means embeds the abandonment time information only when the packet to be transmitted is a specific kind of packet.

20 3. An access relaying apparatus for constituting a local network with one or more radio communication terminals and mutually performing radio data communication,

wherein, when successively transmitting a plurality of packets to another radio communication terminal in the local
25 network or to the access relaying apparatus, the radio

communication terminal embeds, for transmission, abandonment time information in a packet to be transmitted, the abandonment time information being information of a time until a packet to be transmitted next to the packet, when left unsent, is abandoned
5 through time-out control, and comprises:

reception means for receiving all packets of data transmitted from the radio communication terminal;

reading out means for reading out abandonment time information contained in the packet received by the reception
10 means;

determination means for determining whether or not the reception means has received a packet next to the packet received by the reception means before a time contained in the abandonment time information read out by the reading out means elapses; and

15 transmission right granting means for, if the determination means determines that the reception means has not received the next packet, compulsorily granting to a radio communication terminal trying to transmit the next packet a transmission right to transmit the next packet.

20 4. A radio communication terminal for constituting a local network with an access relaying apparatus to perform mutual radio data communications, the radio communication terminal comprising:

information embedding means for, when successively transmitting a plurality of packets to another radio communication
25 terminal in the local network or to the access relaying apparatus,

embedding abandonment time information in a packet to be transmitted, the abandonment time information being information of a time until a packet to be transmitted next to the packet, when left unsent, is abandoned through time-out control;

5 carrier sense means for determining whether a radio transmission line between the other radio communication terminal or the access relaying apparatus and the radio communication terminal is available or not; and

10 transmission means for transmitting the packet having the abandonment time information embedded by the information embedding means into the local network in the form of radio waves when the carrier sense means that determines the radio transmission line is available.